VOLUME 1   ISSUE 3   APRIL 1987

EDITOR'S NOTES

I'm really pleased with the response that I've been getting from our Timexers about the Nite-Times News. The whole idea was to provide an informative online newsletter that could be shared on any Timex/Sinclair supporting BBS. As will always be the case here, I wish to thank all of our contributing writers and everybody who has provided feedback.

The Nite-Times News is a Public Domain feature of the Nite Owl Special BBS. If you desire to have a hard-copy mailed to your home, please provide $6.00 per year to cover the cost of postage. If you desire to reprint any articles that appear on here, please provide credit to the author and where it came from. If you have any suggestions or would like to submit an article, leave feedback to Gary Lessenberry (ID30) or write to me at 1885A Yorktown Avenue, Great Lakes, Illinois 60088. Articles that appear in this issue are:

Z-SI/O Serial Interface
Bringing New Life To your Old Ribbon
Specterm-64 Review
Timex Sinclair Publication Update
Specterm-64 File Conversion
T/S Computer Fest Update
Adding A TTL Monitor To The TS-2068
The Timex 1000 Clone
Zterm-64 Xmodem Fix

Z-SI/O SERIAL INTERFACE
Provided By Ed Grey

To put it simply, the Z-SI/O Card is the best RS-232C I/F available for your T/S2068 at ANY PRICE. This rugged, well made card, which plugs directly into the expansion port of your 2068, will allow you to operate any computer peripherals that require a serial (RS-232) port on your computer. This includes printers and plotters and modems. The Z-SI/O provides a "real"

RS-232 connector (DB-25) and feeds through ALL of the BUSS lines available on the rear of your 2068. Couple the Z-SI/O card together with an RS-232 1200 baud modem and SPECTERM-64 software and you will be amazed. As of press time there are 2 versions of the Z-SI/O, one is compatible with the JLO Disk System, and one for everything else. When ordering, please list your peripherals so that we can assure compatibility. The Z-SI/O employs the Intel type 8251 USART and supports 3 baud rates (300, 1200, 19200) via software control. The 'STOCK' Z-SI/O uses port 9F hex for DATA and port BF hex for CONTROL/STATUS. The JLO DISK version of the Z-SI/O card uses port D7 hex for DATA and port DF hex for CONTROL/STATUS. The Z-SI/O is sold with extensive documentation (a 25+ page user manual) for only $79.00 plus $3.50 S&H (CANADA $6.00 S&H minimum). For more information, write to Grey & Clifford Computer Products, P.O.Box #2186, Inglewood, CA 90305

BRINGING NEW LIFE TO YOUR OLD RIBBONS
By Mike Potter

If you own an Epson printer or another printer that utilizes a plastic housing for it's ribbon, you may be able to revive that old ribbon so it prints as if it were new. To do this, all you need is a small screwdriver, a can of WD-40, and a small motor (1.5 VDC available at Radio Shack). This may sound strange, but it really is quite easy and inexpensive.

Remove your ribbon from your printer and look at it in a good light. You will notice that there is a rather light area to the ribbon (the area that your print head strikes) and darker areas above and below the light one (see figure 1). The dark area of the ribbon is really ink that just dried up from the heat of your printer running or merely time passing. That is where the WD-40 comes in. With the screwdriver, gently pry the top lid off your ribbon cartridge. If it is not removable, don't attempt this because you may just end up ruining your ribbon. However, all Epson cartridges can be taken apart. You will notice that the loop of ribbon is loosely jumbled around the inside of the cartridge, this is normal and must not be tampered with. Spray a light coating of WD-40 over the ribbon to wet it. You don't want to drown it! The purpose of this is to loosen up the dried ink and spread it over the surface of the ribbon again, thus "re-inking" it. Now close the cartridge back up.
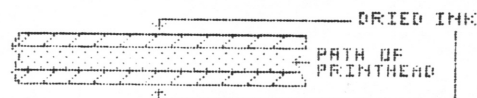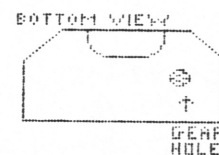

FIGURE 1   FIGURE 2

Do not us your ribbon yet! It must be completely dry first! This is where the motor comes into play. Locate the small hole on the bottom of the cartridge (see figure 2). This is where the printer moves the ribbon and it is also where you will insert the motor with a gear that will fit into the hole. This will allow you to use the motor to spin the ribbon and air dry it. This also allows the ribbon to dry evenly. The process of drying could take as long as 24 hours, but be patient! If the ribbon is not completely dry, it will print in splotches and may even ruin your print head.

The other alternative you have to using the motor is to spin the ribbon by hand using the knob on the cartridge. This however, is a very time consuming chore and only recommended if you are EXTREMELY bored. Happy Re-inking!

SPECTERM-64 V 4.0 & 4.1
By Pete Fischer

This program first appeared as a commercial program in England where it is widely used on the Spectrum. Grey & Clifford Computer Products obtained the rights to sell it in the U.S. as modified for the 2068. Version 4.0 ran only in Spectrum mode. There are both Spectrum & 2068 versions of version 4.1.

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! NOTE: I originally reviewed  !
! this software in Ver. 1.0 of !
! "The T/S Guide to Telecommun-!
! ications". Much of that re-  !
! view proved erroneous. Please!
! read the following carefully !
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The Big news here is Telecommunications at 1200 B.P.S. on the 2068. This is the ONLY way to achieve that speed on this computer. How can I describe 1200 BPS? Well, let me put it this way: If you bought a magazine and could only look at 10 square inches at a time and had to read the ENTIRE MAGAZINE in sequence, that's 300 BPS. But 1200 is like skipping through till you find the part you want, and THEN stopping to read. It's much more satisfying and efficient. It also puts Long Distance telecommunications in a "whole other dimension". As I mentioned elsewhere, an xmodem transfer at 1200 BPS takes ONE EIGHTH the time of a HEX transfer at 300 BPS; with the additional benefit that it's error-free. Once you begin serious downloading, you will truely appreciate this! The second big feature of this software is its versatility which is manifest in a block of 7K designated as a permanent BASIC component. That is, permanent all the time you're online, it dosen't get erased like the buffer in MTERM. However you can easily change it by loading a different version. What good is that block of memory? Well one MAJOR use is to interface the program to YOUR mass storage, WHATEVER that may be: Micrdrive, Disk Drive or Ramdisk (coming soon).

The next major use is to interface a WIDE range of modems which is particularly easy with the use of the Z-SI/O Card, but also possible through other RS-232 interfaces. What else? Well there have been a wide variety of utilities written for MTERM, over the years, all squeezed into small blocks of memory left over by accident . The 7K Block of the Specterm software is a LARGE BLOCK by comparison. In it you could easily put printer drivers or auto-save routines or a number of other utilities all at the same time!

Those routines used to I/F the mass storage and modems are called OVERLAYS, and were developed long ago by CP/M programmers to allow easy modification of a program without divulging the SOURCE CODE. When you buy Specterm-64, what you're buying is the CODE. But packaged with it, as a convenience are some examples of these OVERLAYS.

In my first review, I said, quite negatively, that you need to enter a long BASIC statement in order to check the buffer. That was ABSOLUTELY FALSE! You can simply incorporate this statement into the BASIC component, and thus easily check the buffer, simply by escaping to BASIC. In fact, this routine is provided in the stock tape as it comes from Grey & Clifford. I had simply failed to load that particular Overlay.

This terminal generates 64 columns WITHOUT the use of the OS-64 cartridge. This in itself turns out to be a big feature. Nearly all BBS' are configured for 80 columns, and while it isn't perfect, 64 col. is MUCH closer. A monitor is pretty essential, one I bought for $30 worked great. The character set has been designed to add readability (better than Tasword, I think). Once you get used to 64 col.,it's difficult to go back to 32 col. for terminal work. The 64 col. DRAMATICALLY increases the amount of information on the screen at any one time. All too often, at 32 col., by the time you get to the bottom of a menu, the top has scrolled off the screen. Then you have to work from memory. This NEVER happens with 64 col. In addition, the ARRANGEMENT of the menu on the screen makes it easier to follow. In my original review, I decried the lack of 80 col. printing facility. Besides the potential to add one thru the 7K BASIC area, buffer saves are COMPLETELY Tasword-II compatible. Although they may be too long, it's easy to break them up with UNLOADER, then simply load the File into Tasword and print from there.

Also, in my original review I stated that, upon downloading, it was impossible to tell if the transfer was successful or not. THAT WAS ALSO INCORRECT. The blinking "R" on the screen tells you it's a successful transfer. Another mistake I made in my first review was when I said, "If you forget the Caps-lock and enter a lower case letter in command mode....you must then reboot the program." Not true at all! (are you beginning to see how BADLY I mangled the first review?) If you make the above error, it will simply refuse the command until you use a capitol letter. It will lock up and need rebooting if you go offline (using the 2050 modem) and fail to immediately escape to BASIC. However, once you understand this, there's no problem.

Since my original review, I've put this program through a great deal of testing, spending hours and hours online & making over 100 downloads and uploads of all descriptions. I moved AMIGA files, MAC files, IBM files text files & Etc. It worked beautifully. There WERE failures but none I couldn't eventually trace to operator error or host error. The trick to moving files of foreign computers is this: don't SAVE/LOAD it. Call board A, D/L a file, disconnect, call board B and U/L. As I said, I did this MANY times with great success.

One feature I grew to like more and more was the speed of the keyboard. The Keyboard scan routine on MTERM is a very slow one. Put mildly, it's a PAIN. I can, and frequently do, out-type it. But the joy of the Specterm is that I can type MUCH much faster. This is great on L.D. calls! Specterm also gives you "audio feedback" for each keypress. I really missed it when I went back to other terms. My experience showed that Ver. 4.0 was a bit TOO fast, but both versions of 4.1 are adjustable, so you can select the speed you want. The new version also allows for color control of the screen.

One of the best things about this program is the certainty of future support. You will be hard pressed to find any two people who are more knowledgeable or have done more for T/S Telecommunications than Ed Grey and Dave Clifford. Their support is available both by voice and by data, the latter in the form of the TIME<X>CHANGE BBS. They and fellow users are currently working on utilities & overlays to enhance the program which are available for download on the BBS free.

So the big reasons for going to Specterm 64 are these:
1) 1200 BPS communications, the ONLY way to do this w/2068
2) Tremendous versatility in the form of a wide-open 7K BASIC Component thus enabling direct access to your mass storage device and/or a wide variety of modems.
3) VERY active continued support for the system with new utilities & additions all the time-available on the TIME<X>CHANGE BBS.
4) The size of the buffer: 31K+
5) Better display & no need for the OS-64 cartridge.
6) Faster keyboard (The newest version lets you adjust)
7) Allows you to use nearly ANY RS-232 modem (the industry standard) when used with the Z-SI/O Card.

The main differences between version 4.0 and the two versions 4.1 (both Spectrum & TS 2068) are these:
A.) There is no 2068 version 4.0, only Spectrum
B) You can adjust the speed of the keyboard on 4.1 not on 4.0.
C) The new version has a "relaxed" xmodem which works perfectly on PC Pursuit.
D) You can change the screen color on Ver.4.1, you couldn't on 4.0. If you own 4.0 and want to upgrade to the SPECTRUM version of 4.1, it will cost you $5.00.

If you want the 2068 version 4.1 then it will cost you $30 + $2 S&H. The program is available from RMG, Variety Sales or from Grey & Clifford Computer Products/POBox 2186/Inglewood, CA 90305 (213)759-7406

TIMEX SINCLAIR PUBLICATIONS UPDATE
By Gary Lessenberry

I have recieved word that I failed to list at least three Timex/Sinclair publications in out March issue. They are:
1. Sinclair User, EEC Publications, 30-31 Islington Green, London N1 8BJ, United Kingdom
2. YOUR SINCLAIR, 14 Rathbone Place, London W1P 1DE, United Kingdom
3. I.S.T.U.G. NewsLetter, c/o Frank Davis, 513 East Main Street, Peru, IN 46970
4. Computers & Video Games (Sunscribtion Dept), Competition House, Farmdon Road, Market Harborough, Leicestershire, United Kingdom

SPECTERM-64 FILE CONVERSION
Provided By Ed Grey

Programs that have been uploaded to a BBS via the Specterm-64 Xmodem and then downloaded using the Loader V Xmodem for Mterm are not immediately usable. Before attempting to save your downloaded program, perform the following steps first:
1. Download the Specterm-64 program using Loader V.
2. Exit to BASIC
3. enter PRINT PEEK 23635 (this value is usually 86)
4. add 32 to the value in step 3 (usually 86+32=118)
5. enter POKE 23635, 118 (or whatever the sum in step 4 is)
6. enter LIST
7. enter SAVE "name"

SINCLAIR/TIMEX MIDWEST COMPUTER FEST UPDATE
Provided By Gary Lessenberry

In a few short weeks, the secind annual Sinclair/Timex Midwest Computer Fest will be underway in Indianapolis. At this time, there are 34 vendors and eight user groups that will be represented. The Fest will operate 9:00 AM to 6:00 PM on May 2nd and 9:00 AM to 5:00 PM on May 3rd. There will be 24 different seminars, special dealer discounts and Flea market/ Swap Area. Tickets at the door are $6.00 for a single and $9.00 for a family. The location is the Holiday Inn North (317) 872 -9790, 3850 DePauw Boulevard, Indianapolis. To get there: Take interstae I-65 south to interstate I-465 east, exit southbound on US 421 (Exit 37) and the Holiday Inn on your left as you drive south on US 421.

ADDING A TTL MONITOR TO YOUR TS-2068
By Gary Lessenberry

Have you ever tried to work in 64 colunm mode with a color television? Although your color TV is fine for 32 column text and games, it can be a visual nightmare with 64 column text. Like many of us, I was hessitant to spend $200+ for an RGB monitor and a composite monitor just wasn't quite clear enough to make it worthwhile. The solution was one of the many monochrome TTL monitors that can be found in the Computer Shopper each month for $20 or so. Several of us ordered Panasonic Model K-904B1 displays from BG Micro. These are brand new units that come with a service manual. The monitors were uncased and without a power supply. Building a retangular wooden box to set the chasis in was easy. However, the power supply was a little more difficult. It required a 12 VDC, 1 Amp power supply which can be expensive when purchased over the counter. I found a power supply from Jameco Electronics (Part #PS72559) that sold for $14.95 and provides a single power source for my monitor, TS-2068, Disk Drives (2), TS-2050 and WICO Trackball. I will explain how to interface this power supply in an article in our May issue.

I now had everything that I needed, except for an interface. TTL monitor interfaces are not available on the TS market. Our TTL interface is actually a a modification of the John Oliger RGB interface. The pins of you TS-2068 edge card that are used for this are:

B4 (+5VDC)	B27 (Red)
B28 (Green)	B29 (Blue)
B31 (Video)	B32 (Ground)

Side B of the 2068 motherboard is the non-component side. There are two steps to this project: modifying the 2068 and building the TTL interface.

Parts for this project include:
74HC00 Quad AND Gate IC (U2)
7432 Quad OR Gate IC (U1)
47K ohm, 1/8 watt resistor (R2)
1K ohm variable resistor (R1)
32 pin edge connector
ribbon cable
perforated board
wire wrap wire
soldering iron & solder
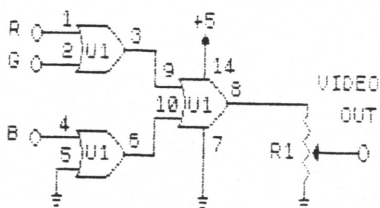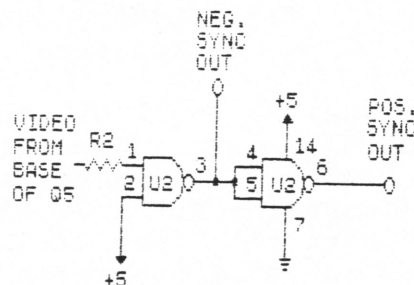exacto knife (to cut trace)
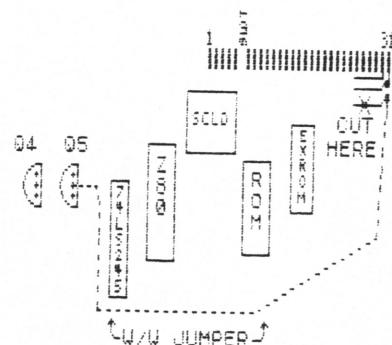

FIGURE 1

FIGURE 2

FIGURE 3

The modification to the 2068 is an easy one (see fig 3), cut the trace that terminates immediately behind edge slot A31 on the top (component side) of the motherboard. Solder a jumper (using wire wrap wire) from the center leg of Q5 to the solder dot at the right of the severed trace. This allows the DC clamped b/w composite video at the base of Q5 to be delivered to the edge connnector pin B31.

On your perforated board, you will constuct the two interface circuits shown in figures 1 & 2. To OR gate the RGB signals into a compatible video signal (fig 1), construct the following: B27 (RED) to U1/1, B28 (GREEN) to U1/2, B29 (BLUE) to U1/4, B32 (GROUND) to U1/5 & U1/7, B4 (+5vdc) to U1/14, U1/3 to U1/9, U1/6 to U1/10, U1/8 to R1, B32 (GROUND) to R2. The second circuit on the perforated card (fig 2) will provide the horizontal and vertical syncs. Construct the following: B31 (VIDEO) to R2, R2 to U2/1, B4 (+5vdc) to U2/2 & U2/14, U2/3 to U2/4 & U2/5, B32 (GROUND) to U2/7. The outputs from this interface will go to the following: U2/6 (positive sync input) to the vert sync and horiz sync on monitor, R1 wiper (video input) to the video input on monitor.

This monitor will provide you with the cleanest, clearest high resolution text of any monitor available for the TS-2068. However, be advised that since the colors are all gated together, you will display only color or black. If you are using a program that that has the ink, boarder and paper at colors other than black, your screen with be solid green without any distinguishing features! The best combination of boarder, paper and ink are boarder 0, paper 0 and ink 7.

AN UNDERSTANDING OF BAUD RATES
By Gary Lessenberry

Anybody who has ever played with a modem can easily refer to the devices speed as measure by it's BAUD rate. To put it in it's simplest terms, baud rate is the same as saying BPS (bits per second). Thus a 300 baud modem can transfer at a rate of 300 bits per second. We may assume that we will generate one start bit, one stop bit and eight data bits for each character that we transfer. Therefore, we now know that our 300 baud modems are exchanging information at a rate of 300 bits per second or 30 characters per second.

TIMEX 1000 CLONE
By Ken Duda

If you own a Timex/1000 or ZX-81, then you must remember all the things you wished Timex or Sinclair would have done to improve the ZX-81/1000. Well about a month ago I saw an advertisement in a magazine for a PC 8300 computer. They had claimed it would run on all Timex/ZX-81 software, among other things. Being only $ 29.95 I thought how could I go wrong.

After a few weeks I recived the PC 8300. And to my suprise,

after opening the box it came in, I found this little jewel to be made in CHINA. The instruction book that came with it was in both Chinise and English. The computer itself had undergone some major changes. A little to late for some of us, but not for some group's that are still heavy into the ZX/1000.

The first thing that strikes your eye, is the case. Instead of the small square black case with membrane keys, you will now find a case that looks very similar to the Timex/Sinclair 2068, including the chiclet type keys. It is cream colored with green keys. There are nolonger any connections on the side. Everything is to be found on the backside, starting from left to right (looking at the rear), DC Power, EAR, MIC, MONITOR, EDGE CONNECTOR (dead center), JOYSTICK PORT, TV plug.

I started out by useing the Monitor plug and composit vidio monitor. After pluging in the power supply, I was greeted with a message in the top left hand of the screen. One word "READY" white letters on a black back ground (inverse screen). After playing with it for about a half hour or so I found the following. The only single key functions left are the math symbols, all others must be typed in. It has a line number key, for example, type in 10FORA=1TO20---press ENTER, and when it goes to the top of the screen you will see, 10 FOR A=1 TO 20. All spaces have been added for you. Now press the Line Number Key and a 20 will apear, ect.

It has a RESET key top right side of the keyboard next to the power on LED bulb. All Graphics symbles are located on the last three rows of keys, instead of the top. No more shifting to get the proper graphics, what you see is what you get. The arrow keys are at the bottom center row of keys, and the Joystick port I mentioned early on, is tied into them. (no stick command) It even has a built in programmable speaker. And I might add, that its pretty loud. They give example's of some songs that can be played in the manaul.

The keys themself give a BEEP sound as you press them when typing in a program. The top row of keys give the higher pitch, low row lowest. You can turn it off by just typing in "NOBEEP" and ENTER. If you still have your old 16K RAM pack, just plug it in, it will work. And it won't crash like the old ZX/1000 did. The ram pack does not touch the table surface, and is a very tight fit. There is more, but I think I'll give someone eles a chance to write about it. If your interested in getting one, the address is as follows:

American Design Components, 62 Joseph Street, Moonachie, New Jersey 07074, telephone (800) 524-0809

ZTERM-64 XMODEM FIX
By Edwin L. Schoen

The patches I have made for Zterm-64 were at the request of Gary Lessenberry who communicated with one of the original Zterm programmers, Jeff Street. According to them, the problems were concerning the final blocks of both the SEND and RECEIVE functions. When sending, Zterm did not fill the last block with

CTRL-Z's when the data in the block was less than 128 bytes long. When receiving, it left the CTRL-Z's (that were being used as a last block filler) within the buffer which will corrupt the data and sometimes hang up your receiver, especially if the file was a program.

The first problem was easy to fix, and hard to find a memory location to implement. However, because Zterm-64 is so nicely written (Modular, to coin a buzz-word), I was able to simply change the fill character at location 57875 to a 26 (CTRL-Z) and jump back into the part of the program that stores a byte and updates the checksum which the original program never did for its fill character (NULL).

The second problem of removing the fill characters (CTRL-Z's) from a final block was much more difficult, since Zterm makes no attempt to update ELINE and other system variables except PROG (start of buffer address 31510) and VARS (end of buffer+1). It may be of interest that when you enter Zterm, PROG=31510=VARS and this address contains 128 and RAMTOP (PEEK 23730) points to 49151. Thus, the usable area of memory is 49151-31510 = 17641 bytes. Zterm only allows the use of 17000 bytes for send/receive and presumably the extra 641 bytes are reserved for the stack. Note that when doing an xmodem receive, the Zterm buffer will reflect the total number of bytes recieved, including the filler. Therefore, its buffer value (a multiple of 128) may not match the value of the sender's buffer.

Getting back to the fix for receiving data via Xmodem. I found that the area immediately after Zterm (address 58602) was not used and this is where my patches are now located. These patches backup the end of buffer pointer (VARS) over all the CTRL-Z filler (58620=26=CTRL-Z) and terminate when any other character is found. If the terminal character is a CR or LF, the patches simply bump VARS up one byte and inserts the start of VARS marker (128). If the terminal character is anything else, the patched append a CR as the last byte of the buffer and then bumps VARS beyond the CR where they insert the 128 marker.

* * * * * * * * * * * * * *
* Zterm Patch Program Listing *
* * * * * * * * * * * * * *

10 REM This BASIC program contains my fixes for the Zterm-64 Xmodem bugs. They take care of the problems with the last block sent or received.
12 REM Simply CLEAR 47000, LOAD "ztermcod" CODE and then RUN this program. That's All Folks!
14 REM The first fix pads an incomplete final block with CTRL-Z's when sending. The second fix removes the CNT-Z's from the last block received.
16 REM Zterm-64 Fixes by:
18 REM Edwin L. Schoen, 4/2/87
20 DATA 57874,4,62,26,24,242
22 DATA 58298,2,234,228
24 DATA 58602,40,229,42,75,92,197,6,128,43,126,254
25 DATA 13,40,15,254,10,40,11,254,26,32

```
26 DATA 4,16,240,24,9,35,54,13,35,54,128
27 DATA 34,75,92,193,225,205,127,194,201
30 REM Patch SEND buffer: GO SUB 60: REM Call my FIX
routine: GO SUB 60: REM Fix RECEIVE buffer end-pointer: GO SUB
60
40 SAVE "ztercod"CODE 47000,16384
50 BEEP .25,10: BEEP .25,10: BEEP .25,10: BEEP 1,6
51 BEEP .12,8: BEEP .12,8: BEEP .12,8: BEEP 1,5
52 STOP
60 READ Adrs: READ Size: FOR i=Adrs to Adrs+Siz-1: READ v:
POKE i,v: Next i: RETURN
```

This BASIC program is available for download in the Timex
Upload/Download area of the Nite Owl Special BBS.

TIMEX/SINCLAIR NEWS AND TIPS
By Gary Lessenberry

According to Pete Fischer, Timex has discontinued the repair
of their computers. When asked "Why?", a representative of
Timex said that they only offered the repair services for three
years since they had ceased marketing the computers because
they were required to by law.

Clive Sinclair has developed another computer called the Z88
from Cambridge Computers. It is a portable, lap-top computer
that is Z80 based, with an LED screen, built in software, 32k
of RAM (expandable to 4 meg). The text files are suppose to be
IBM compatible. This interesting little machine should sell for
$300.00 to $350.00 by the time it gets to this country. A
representative from Sharp's Inc, has indicated that they are
currently trying to get one of these for demo purposes during
the Midwest Timex Computerfest.

We have added yet another file to the Timex Info area of the
Nite Owl Special BBS General Library. It is a listing of Timex
Books. Our source was the 1985-1986 Books In Print and the
North Suburban Library System online card catalog system. If
you notice any books missing from this list, please let us
know.

To change from lower to upper case and visa versa when
writing programs in SUPERBASIC with your QL, you poke address
163976 with zero (for lower case) or anything other than zero
(for upper case).

The April issue of Modern Electronics has an article that
tells how to convert your old TS-1000 into a programable print
buffer.

TIMEX/SINCLAIR BBS LIST
(APRIL 1987)

BULLETIN BOARD	NUMBER	NOTES	RATES
TIME-=<X>=-CHANGE BBS	(213) 329-3922	8 H D @	17/15
OMNI-NET BBS	(718) 837-2881	7 M D	16/14
BILL'S OBSESSION BBS	(404) 377-2550	8 H D @	16/15
OWEGO FREE ACADEMY BBS	(607) 754-3420	8 L D	16/15
STU BBS	(216) 327-1099	8 H D	15/14
SERIAL PORT BBS	(313) 286-0145	8 H D	15/13
NITE OWL SPECIAL BBS	(312) 459-5721	8 M D	-----
VSYS TIMEX/SINCLAIR BBS	(201) 527-0535	7 M @ % ?	16/15
QLCOM BBS	(201) 328-2919	7 M D @	16/15
FUTURE ELECTRONICS BBS	(813) 522-0350	7 L	17/15
FWKUG MBBS	(214) 540-4183	8 D @	16/15
ISTUG BBS	(317) 898-3903	7 H	15/13
LOONEY BIN BBS	(619) 390-9470	7 L	17/15
THE TOXIC DUMP BBS	(609) 890-6347	8 L	16/15
THE TIME WARP BBS	(617) 755-0118	7 L % ?	16/15
THE NORTH POST	(219) 256-5870	7 L %	15/12
TYLER TIMEX BBS	(214) 593-3331	8 M D	16/15
FLEXI BBS	(617) 648-7651	8 L @ % ?	16/15
SINC CITY BBS	(617) 986-8449	7 M D @	16/15
CLEVELAND FREE-NET BBS	(216) 368-3888	7 L @	15/14
MAINSTREET DATA BBS	(619) 439-6624	8 $	16/15
STARTEXT	(214) 877-1041	8 M $	16/15
PEOPLE-LINK	(800) 826-8855	8 M $	-----
PEOPLE-LINK IN AC 312	(312) 822-9712	8 M $	-----
COMPUSERVE	(312) 443-1250	7 H D $	-----
JJ'S FIDO	(505) 522-7081	8 L D	17/15
TEACHER'S PET BBS	(704) 547-4185	8 L D %	16/15
R.M.G. BBS	(503) 656-8072	8 H @ %	17/15
ALICES RESTAURANT BBS	(914) 477-8017	7 L	16/15
KINGS MARKET BBS	(303) 665-6091	8 M D @	16/15
TIME-HEX BBS	(317) 362-8085	8 M %	15/13
THE BUS DEPOT BBS	(904) 262-6761	8 L D	16/15
LT-BBS**MET-DBS	(805) 942-7301	8 M D	17/15
PGHTSUG BBS	(412) 481-9327	8 M D	15/14

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** NOTES **

7	PARAMETERS = 7/E/1
8	PARAMETERS = 8/N/1
D	TIMEX FILE TRANSFERS
L	LOW USAGE TIMEX MESSAGE BASE
M	MEDIUM USAGE TIMEX MESSAGE BASE
H	HIGH USAGE TIMEX MESSAGE BASE
$	SUBSCRIPTION REQUIRED
%	OPERATION DURING EVENINGS
@	ACCESSIBLE VIA PC PURSUIT
?	DOWN UNTIL FURTHER NOTICE

RATES ARE THE CHARGES FROM CHICAGO FOR THE FIRST
MINUTE & EACH FOLLOWING MINUTE AFTER 11:00 PM.

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